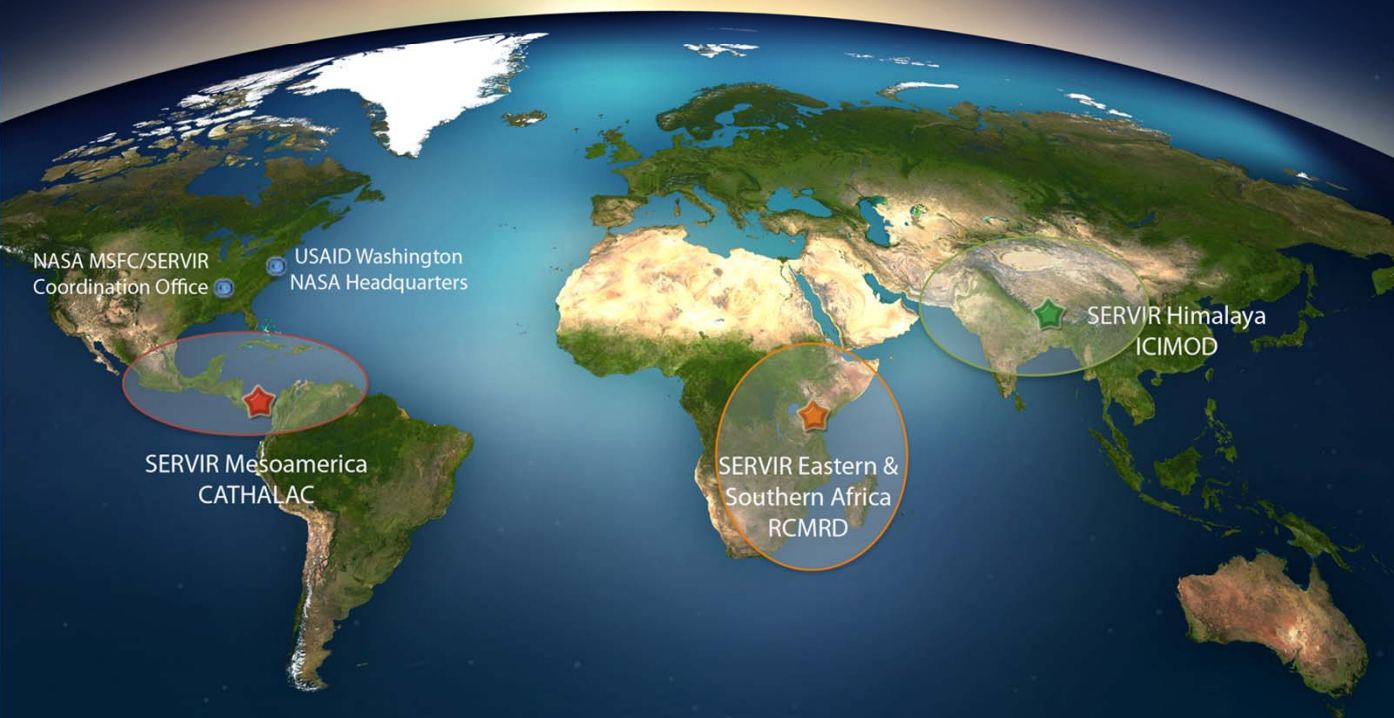


Each panel is 1368x768



From space, we can view our planet in new ways.

As a joint initiative of NASA and USAID working in partnership with leading regional organizations, SERVIR *connects space to village* by helping people in developing countries use that view to gain knowledge and insights about their environments.

We teach regional decision-makers to use Earth observation satellite data, Geographic Information Systems, and predictive models for addressing issues such as water and land use, natural disasters, agricultural problems, biodiversity conservation, and more to improve the lives, livelihoods, safety, and future of the people in their countries.



29 Countries with SERVIR activities*

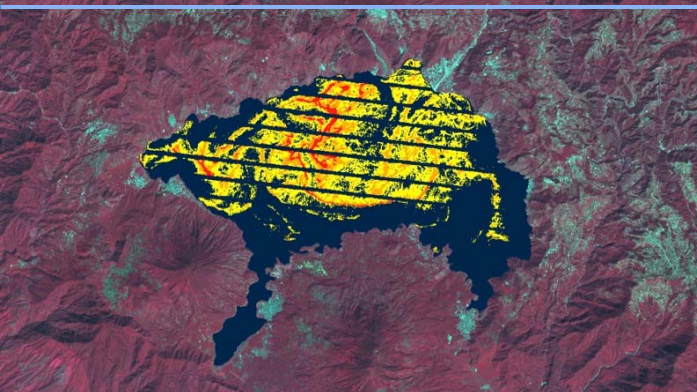
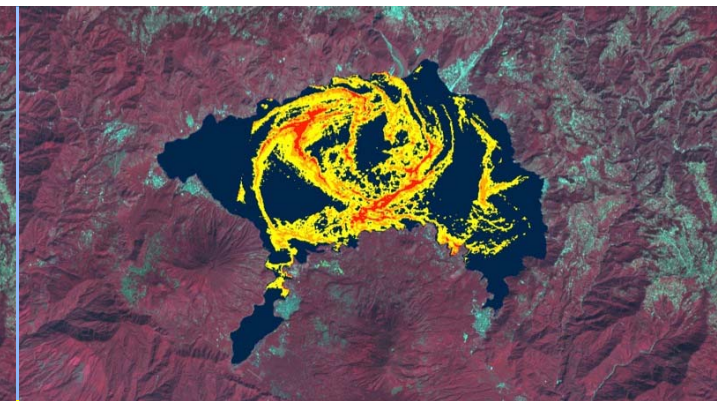
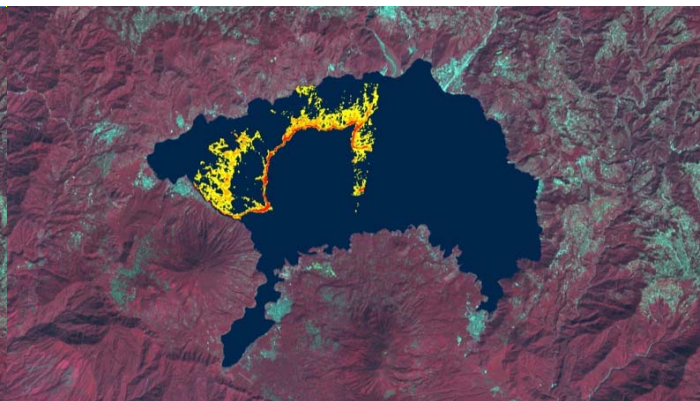
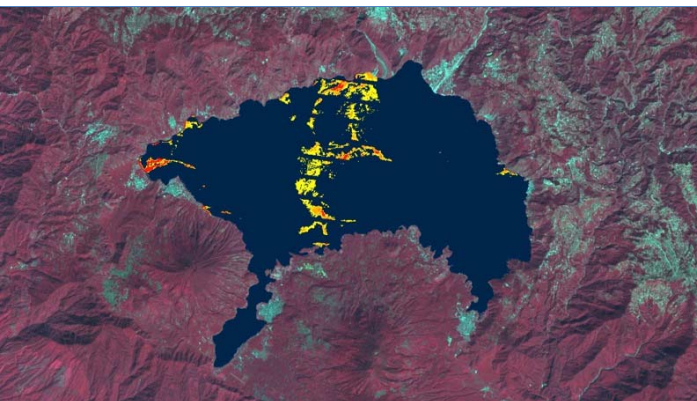


A world map with 29 countries highlighted in white, indicating SERVIR activities. The countries are distributed across North America, Central America, South America, Africa, Asia, and the Pacific. The highlighted countries are: Mexico, Guatemala, El Salvador, Nicaragua, Costa Rica, Panama, Belize, Honduras, Dominican Republic, South Sudan, Uganda, Rwanda, Burundi, Zambia, Botswana, Namibia, Pakistan, Ethiopia, Kenya, Tanzania, Malawi, Mozambique, Seychelles, Mauritius, Madagascar, Swaziland, Nepal, Bhutan, and Bangladesh.

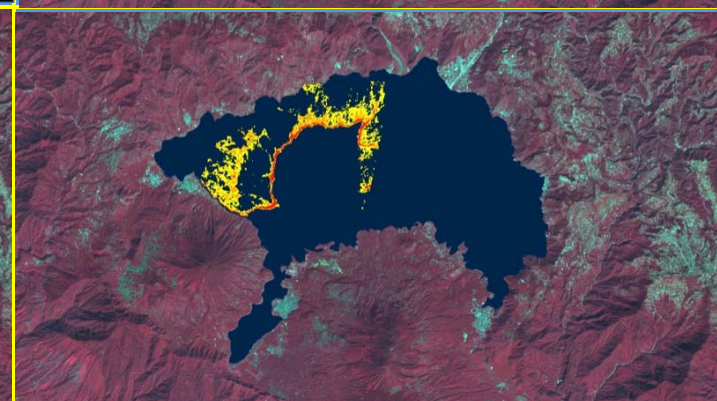
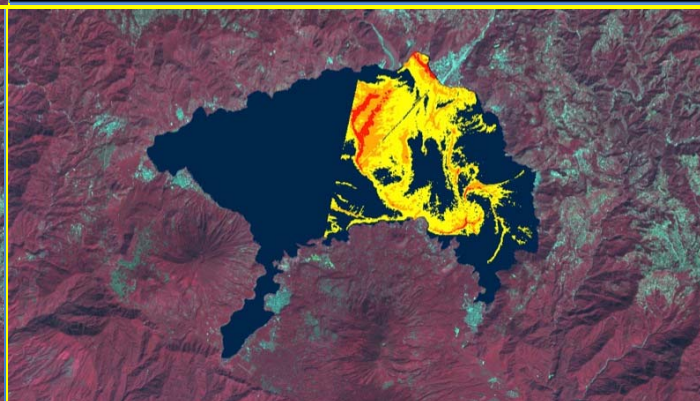
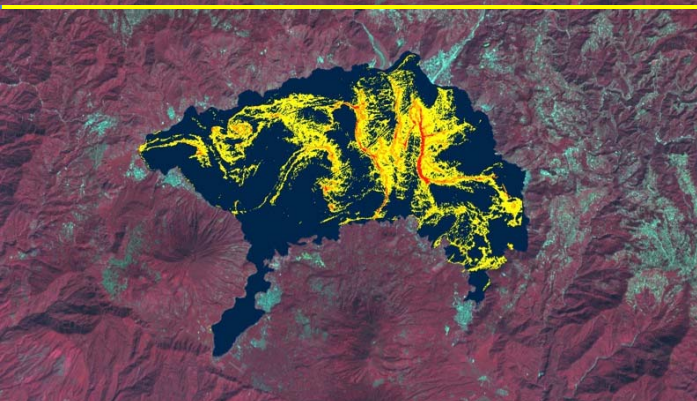
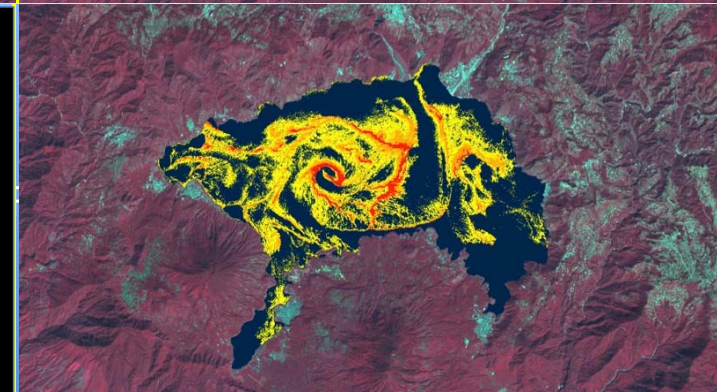
Region	Countries
North America	Mexico
Central America	Guatemala, El Salvador, Nicaragua, Costa Rica, Panama
South America	Belize, Honduras, Dominican Republic
Africa	South Sudan, Uganda, Rwanda, Burundi, Zambia, Botswana, Namibia
Asia	Pakistan, Ethiopia, Kenya, Tanzania, Malawi, Mozambique, Nepal, Bhutan, Bangladesh
Pacific	Seychelles, Mauritius, Madagascar, Swaziland

* Products, applications, training

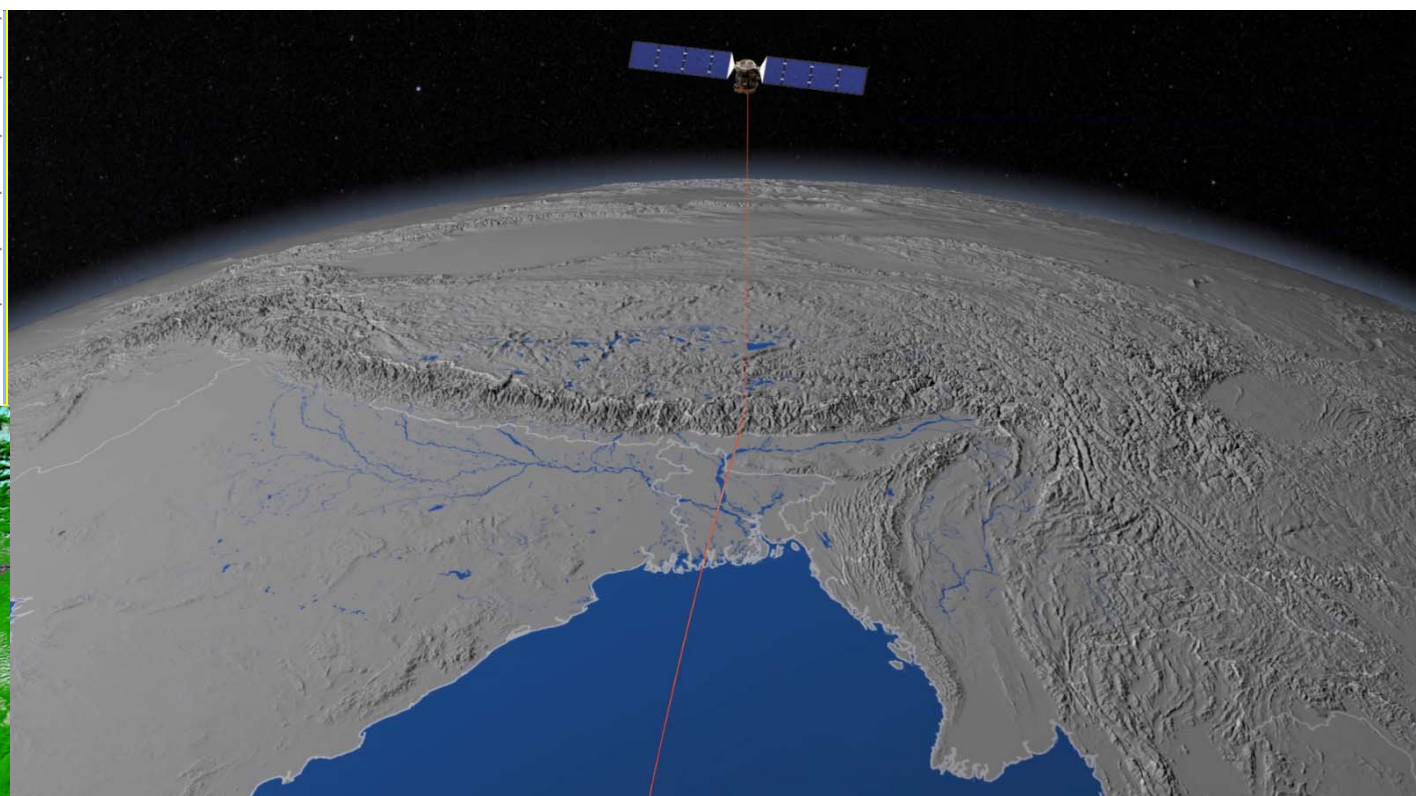
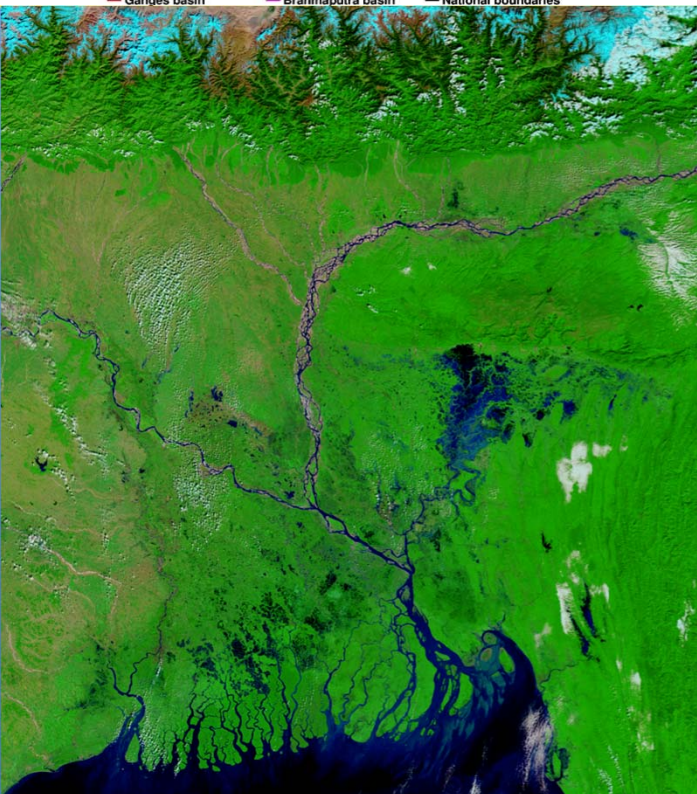
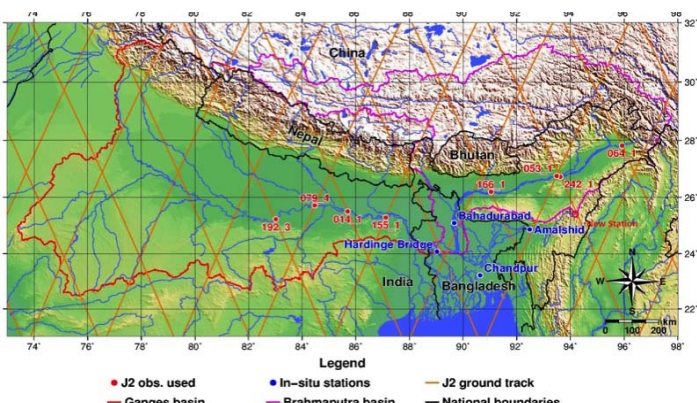




SERVIR developed an algorithm that retrieves ocean chlorophyll concentration from NASA's Hyperion sensor onboard the EO-1 satellite to model water quality in Lake Atitlan. Chlorophyll concentration is an indicator of algal blooms, which thrive on pollutants – undesirable nutrients -- in the water. Chlorophyll concentration is therefore a measure of water quality.

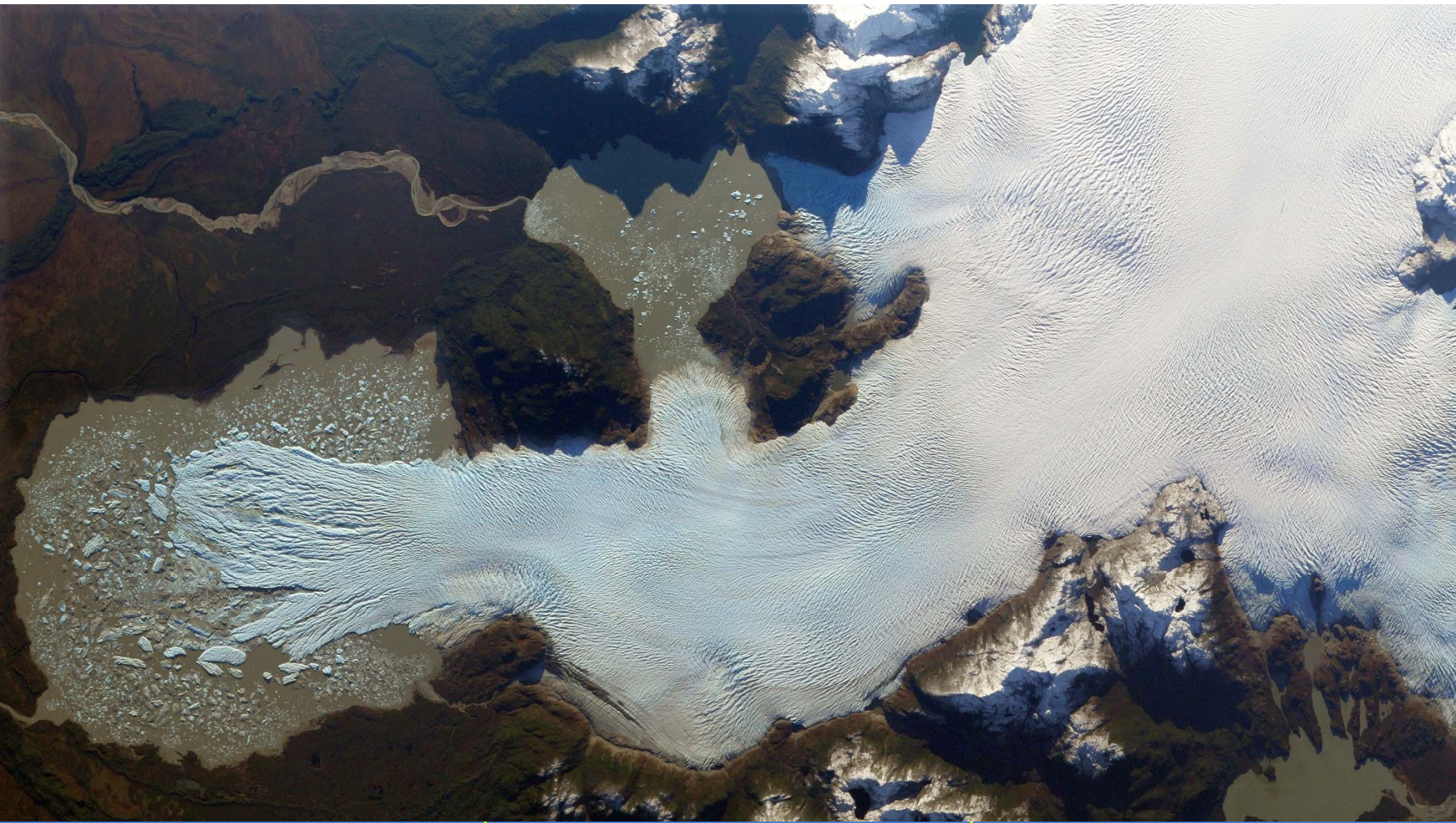






The SERVIR Applied Sciences Team and ICIMOD is helping Bangladesh with the use of NASA satellite data to increase the flood forecast window. A radar altimeter on the Jason-2 satellite measures the river's height at the point of crossing, so flood risks downstream can be assessed. The system provides 8 days advance warning of impending flood versus 3 days provided by traditional system.

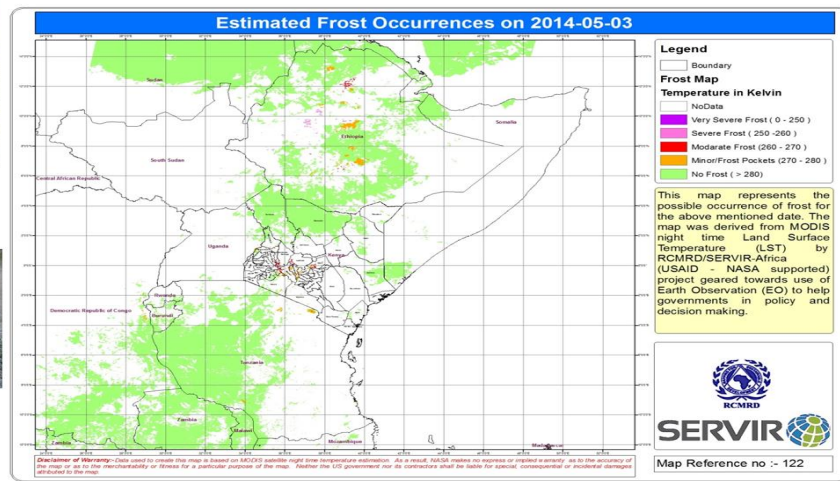






SERVIR-Africa Frost Monitoring

SERVIR-Africa Frost mapping System automatically generates Frost Occurrence Maps, using Near Real Time MODIS LST Powered by ArcGIS Arcpy Python Library



SERVIR

SERVIR partners with RCMRD at SERVIR-Eastern and Southern Africa to address such issues as drought, floods, land cover, and frost. Frost can cause millions of dollars in damage to tea crops, which is a major industry in Kenya and provides a living for about 4 million persons. Farmers can take preventive action against frost if they know where and when it might occur.

SERVIR- Eastern and Southern Africa created an automated, near real-time frost mapping system using satellite and in-situ data. The system emails daily maps identifying areas with high potential for frost to Kenya Meteorological Service, the Tea Research Foundation of Kenya, and others. The two photos were taken during the time SERVIR's frost alert system issued cautions about the frosty conditions outlined in red on the map.



NASA low cost Wireless Sensor Network for instu temperature, humidity, wind and rainfall Data collection for Frost monitoring calibration



Photos of Frost occurrence in Aberdare Range Lands in Kenya



GEOGRAPHIC LEARNING
for Sustainable Development

"In all of this, I have again gained firm conviction in my belief that significance is not by salary, sex or status; it is by serving others. It's always a good thing to serve others and it is my conclusion that we need more SERVIR initiatives to serve the world and eventually heal her." – MyCOE / SERVIR Fellow Wasiu Alimi, Nigeria



... to village.

Building the capacity of people in developing countries to solve environmental problems in sustainable ways.

Transforming images and data from Earth observation satellites into practical information.

Supporting informed policy decisions to benefit communities and the planet.

Offering tailored satellite and geospatial applications to meet "village"-defined needs.

Training local end-users to apply satellite and geospatial resources to critical societal questions.

Improving access to Earth observations and geospatial tools for governments, NGOs, universities, and the public through SERVIRGlobal.net.

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NASA MSFC

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